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Electron spin resonance of the Kondo ion in YbRh2Si2

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Abstract

By means of electron spin resonance (ESR) we investigated the dynamic magnetic properties of the heavy fermion metal YbRh2Si2. This is the first observation of Yb3+-ESR in YbRh2Si 2 being also the first ESR signal of a Kondo ion in a dense Kondo lattice system. Below T = 25 K strongly anisotropic ESR spectra observed in high-quality single crystals demonstrate the existence of local Yb3+ magnetic moments even below a characteristic spin fluctuation temperature derived from thermodynamic properties.

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Keywords

Electron spin resonance, YbRh2Si2